

Year 5 - Forces

Key Vocabulary

Forces	Pushes or pulls.
Gravity	A pulling force exerted by the Earth (or anything else which has mass).
Earth's gravitational pull	The pull that Earth exerts on an object, pulling it towards Earth's centre. It is the Earth's gravitational pull which keeps us on the ground.
Weight	The measure of the force of gravity on an object
Mass	A measure of how much matter (or 'stuff') is inside an object.
Fall	To move from a higher to a lower level, typically rapidly and without control.
Air resistance	A type of friction between air and another material.
Water resistance	Something that will not be penetrated by liquid or destroyed by exposure to liquid but that will instead repel the liquid.
Levers	A rigid bar resting on a pivot, used to move a heavy or firmly fixed load with one end when pressure is applied to the other.
Magnetic force	Attraction or repulsion between substances made of certain materials, such as iron, nickel, cobalt, and steel.

Did you know?

A way to lift heavy weights using the least amount of effort is with a lever. The longer the lever, the easier it is to lift.

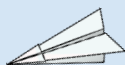
Water Resistance

Water resistance is a type of friction which can slow things down in the water. Water acts upon objects making them harder to pass through. A fish has a streamlined body shape to help it swim through water more easily. Upthrust is the name of the force which keeps things afloat in water. When gravity is greater than upthrust, the object sinks. When the two are the same, the object floats.



Air Resistance

Air resistance (sometimes referred to as drag) acts against gravity on falling or moving objects. It's what you feel on your hair when riding fast on a bike or it's what fills a parachute to help slow you down when falling from the sky. Objects such as aeroplanes reduce air resistance because of their streamlined shape.



Gravity

Gravity is a force that holds things to Earth's surface and prevents things from floating off into the atmosphere. It ensures that unsupported objects fall back down to Earth.



It is said that the famous scientist Isaac Newton was sitting under a tree when an apple fell on his head. He identified it was a force pulling the object down. We now measure gravity in Newtons(N) because of this.



There is gravity on the moon but it is much less than on Earth, so during the moon landings of 1969, astronauts could jump higher for longer due to the weaker pull of gravity.

